

**Remarks**

Support for the above-requested amendments to claim 1 is found at least at page 9, lines 11-19 and in Table 3. Claims 5-14 and 16-25 were canceled without prejudice in previous Amendments.

Applicants understand that Applicants cannot, as a matter of right, amend any finally rejected claim, add new claims, or reinstate previously canceled claims after a final Office Action. However, according to MPEP §714.13, amendments that cancel claims, adopt Examiner suggestions, remove issues for appeal, or in some other way require only a cursory review by the Examiner may be considered. In this regard, Applicants submit that claim 1 has been amended to include a non-ionic surfactant and a dispersant. Applicants respectfully submit that since these features were components of the Markush group of claim 2, a prior art search for the subject matter of claim 1 has already been conducted.

In addition, Applicants respectfully submit that the above-requested amendments are proper despite the finality of the outstanding Office Action because the amendments place the application in condition for allowance and/or place the application in better form for appeal. No question of new matter arises and entry of the above-requested amendments and represented claims is respectfully requested.

Claims 1-4 and 15 are before the Examiner for consideration.

**Rejection under 35 U.S.C. §112, second paragraph**

Claims 1-4 and 15 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. In particular, the Examiner asserts that it is unclear if the language “being applied” is (1) merely describing a step in the process for which the claimed composition is intended to be used or (2) the quoted language is an attempt to convert claim 1 from a composition claim to a method claim. The Examiner has suggested that Applicants amend claim 1 to recite “wherein said process includes applying said binder to” in place of “said binder slurry being applied to” in line 6 of claim 1.

In response to this rejection, Applicants have amended claim 1 as suggested by the Examiner. Accordingly, Applicants respectfully request that this rejection be withdrawn.

**Rejection Under 35 U.S.C. §103(a)**

Claims 1-4 and 15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,120,780 to Martino, *et al.* ("Martino") in view of Vinamul Technical Bulletin 1991 ("Vinamul"). The Examiner asserts that Martino discloses an aqueous composition that includes a polyvinyl acetate film former, an organosilane such as gamma-methacryloxypropyltriethoxy silane and 3-aminopropyltriethoxy silane, and surfactants. It is further asserted that acetic acid is used to adjust the pH to 5-6.5. The Examiner admits that Martino does not teach a polyvinyl acetate/silane copolymer.

In this regard, Vinamul is cited for disclosing RESYN® 25-1037, a vinyl acetate copolymer emulsion containing silane. It is asserted that Vinamul suggests using RESYN® 25-1037 as a forming size binder for glass rovings because the silane group provides excellent adhesion to glass. The Examiner concludes that it would have been obvious for one of skill in the art to use a polyvinyl acetate/silane copolymer as the film former in Martino in view of the disclosure set forth in Vinamul.

In response to this rejection, Applicants respectfully direct the Examiner's attention to independent claim 1 and submit that claim 1 defines a binder slurry that is not taught within Martino and Vinamul. Martino teaches an aqueous glass fiber sizing composition that contains a polyvinyl acetate film former and an organosilane lubricant. (*See, e.g.*, column 2, lines 41-44 and lines 60-61). The organosilane compounds used in the sizing composition may be prepared by reacting selected silane compounds with organo compounds having a long chain hydrocarbon group. (*See, e.g.*, column 2, lines 60-64). Desirably, the pH of the sizing composition ranges from about 2 to 7. (*See, e.g.*, column 6, lines 30-34). Other conventional glass forming size additives such as plasticizers, surfactants, emulsifiers, antistatic agents, and wetting agents may be included in the sizing composition. (*See, e.g.*, column 6, lines 35-38).

Vinamul discloses a vinyl acetate emulsion that contains silane (*i.e.*, RESYN® 1037) for glass fiber rovings used in sheet molding compound (SMC) applications. Vinamul teaches that the silane group provides excellent adhesion to glass. It is asserted that RESYN® 1037 films have very good resistance to softening from styrenated polyester resins. Additionally, Vinamul teaches that the solvent solubility is controlled at low levels to provide a stiff strand in SMC applications.

Applicants respectfully submit that Martino and Vinamul do not teach or suggest a binder slurry that includes a phenolic compatible silane, a polyvinyl acetate/silane copolymer, a non-ionic surfactant, and a defoamer as claimed in claim 1. In particular, Applicants submit that there is no teaching or suggestion within Martino or Vinamul of the utilization of a non-ionic surfactant or a defoamer in a binder slurry. In fact, both Martino and Vinamul are silent with respect to any teaching or suggestion of the use of a non-ionic surfactant or a defoamer for any purpose. As such, it is respectfully submitted that the combination of the teachings of Martino and Vinamul would not result in the binder slurry of claim 1. Accordingly, claim 1 is submitted to be non-obvious and patentable.

In addition, it is submitted that a non-ionic surfactant and a defoamer would not be utilized in the composition of Martino because Martino teaches a sizing composition, not a binder composition as claimed in claim 1. For instance, the inclusion of a defoamer in the size composition of Martino, or any sizing composition, would serve no purpose as the sizing composition is applied directly to the glass fibers. Thus, it is respectfully submitted that one of skill in the art would not include a defoamer as a component in a sizing composition. Nor would one of skill in the art have any motivation to include a defoamer in a size composition. Thus, claim 1 is submitted to be patentable for this additional reason.

Further, Applicants submit that there is no motivation for one of skill in the art to arrive at the presently claimed invention based on the disclosures of Martino and/or Vinamul. In order to establish a *prima facie* case of obviousness, there must be some motivation, either within the reference or in the knowledge of those of skill in the art, to modify the reference or combine the references' teachings, there must be a reasonable expectation of success, and the prior art references must meet all of the claim limitations. (See, e.g., *Manual of Patent Examining Procedure*, Patent Publishing, LLC, Eighth Ed., Rev. 3, August 2005, §2142). It is respectfully submitted that one of ordinary skill in the art would not be motivated to arrive at the binder slurry claimed in claim 1 that includes (1) a phenolic compatible silane, (2) a polyvinyl acetate/silane copolymer, (3) a non-ionic surfactant, and (4) a defoamer based on the teachings of Martino and Vinamul because both Martino and Vinamul are silent with respect to any teaching or suggestion of the use of a non-ionic surfactant or a defoamer. As a result, one of ordinary skill in the art would not be motivated to utilize a non-ionic surfactant or a defoamer in a binder slurry based on the teachings of Martino and/or Vinamul. Without

some teaching or suggestion, there can be no motivation, and without motivation, there can be no *prima facie* case of obviousness.

In view of the above, it is respectfully submitted that independent claim 1 is not taught or suggested by Martino and Vinamul, either alone or in combination, and that claim 1 is therefore non-obvious and patentable. Because claims 2-4 and 15 are dependent upon claim 1, which is not taught or suggested by Martino and/or Vinamul as discussed above and because claims 2-4 and 15 are dependent upon independent claim 1 and contain the same elements as claim 1, it is submitted that dependent claims 2-4 and 15 are also not taught or suggested by Martino and/or Vinamul.

In light of the above, Applicants submit that claims 1-4 and 15 are non-obvious and patentable over Martino and Vinamul and respectfully request reconsideration and withdrawal of this rejection.

#### **Rejection Under 35 U.S.C. §103(a)**

Claim 4 has been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,120,780 to Martino, *et al.* ("Martino") in view of Vinamul Technical Bulletin (1991) ("Vinamul") and further in view of U.S. Patent No. 3,665,027 to Reichel ("Reichel"). The Examiner asserts that it would have been obvious to one of ordinary skill in the art to use gamma-aminopropyl trimethoxy silane in Martino's composition because (1) Martino teaches using an adhesion promoter and (2) Reichel teaches gamma-aminopropylalkoxysilanes as being useful as an adhesion promoter.

In response to this rejection, Applicants respectfully direct the Examiner's attention both to the amendments made to claim 1 and to the arguments presented above with respect to the rejection of claims 1-4 and 15 under 35 U.S.C. §103(a) over Martino in view of Vinamul and submit that claim 1, as amended, defines a binder slurry for a continuous filament mat that is not taught or suggested by Martino and/or Vinamul. Because claim 4 depends from claim 1, which, as discussed above, is not taught or suggested by Martino and/or Vinamul, Applicants submit that claim 4 is also not taught or suggested by Martino and Vinamul. In addition, Applicants submit that the teachings of Reichel fail to make up for the deficiencies of Martino and Vinamul, namely, teaching the inclusion of a non-ionic surfactant and a defoamer in a binder slurry. As a result, Applicants respectfully submit that

claim 4 is non-obvious and patentable over the cited references and respectfully request that this rejection be reconsidered and withdrawn.

**Conclusion**

In light of the above, Applicants believe that this application is now in condition for allowance and therefore request favorable consideration.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized to charge payment or credit any overpayment to Deposit Account No. 50-0568 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

Date: \_\_\_\_\_

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